

CLAIMS

What is claimed is:

1 1. A winder insert for a fish tape reel that is rotatable about a center
2 axis relative to its handle to wind or unwind fish tape about an inner periphery of
3 the reel, wherein the winder engages the reel and has an attachment member
4 engageable by a lever member to rotate the winder insert about the center axis,
5 wherein rotation of the winder insert by the lever member rotates the reel about
6 the center axis so as to wind or unwind the fish tape about the center axis.

1 2. The winder insert of claim 1, wherein the attachment member is at
2 a center of the winder insert concentric with the center axis.

1 3. The winder insert of claim 1, wherein the lever member is
2 removably engageable with the attachment member.

1 4. The winder insert of claim 1, wherein, when the lever member is
2 linked to the attachment member, rotating the lever in a first direction rotates
3 the winder insert in the first direction and rotating the lever in a second direction
4 opposite the first direction rotates the winder insert in the second direction.

1 5. The winder insert of claim 1, wherein, when the lever member is
2 linked to the attachment member, rotating the lever member in a first direction
3 rotates the winder insert in the first direction and rotating the lever member in a
4 second direction opposite the first direction does not rotate the winder insert in
5 either the first or second direction.

1 6. The winder insert of claim 1, wherein the attachment member is a
2 shaft rotatably disposed along the center axis within a center opening of the
3 winder insert.

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1 7. The winder insert of claim 6, wherein the shaft is disposed within a
2 clutch having an outer surface fixed with respect to the winder insert, wherein
3 rotating the lever member in a first direction rotates the shaft and in turn the
4 clutch, and wherein rotating the lever member in a second direction rotates the
5 shaft essentially without rotating the clutch in either of the first and second
6 directions.

1 8. The winder insert of claim 7, wherein rotating the lever member in
2 the first direction winds the fish tape about the inner periphery of the reel.

1 9. The winder insert of claim 7, wherein the clutch is a roller clutch
2 mechanism.

1 10. The winder insert of claim 1, wherein the lever member engages
2 the attachment member in a stud and socket arrangement.

1 11. The winder insert of claim 10, wherein the attachment member
2 defines a multi-sided socket symmetric about the center axis.

1 12. The winder insert of claim 11, wherein the attachment member
2 defines multi-sided sockets at opposite faces of the reel.

1 13. The winder insert of claim 1, wherein the winder insert has a
2 peripheral section defining a plurality of sprockets sized to engage mating
3 surfaces at the inner periphery of the reel.

1 14. The winder insert of claim 13, wherein at least one of the sprockets
2 defines a concave surface sized to abut a convex surface at the inner periphery
3 of the reel.

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1 15. The winder insert of claim 14, wherein there are three sprockets
2 equiangularly spaced about the center axis.

1 16. The winder insert of claim 1, wherein the winder insert is
2 removably mounted to the reel.

1 17. The winder insert of claim 1, wherein the winder insert has a flange
2 of a dimension perpendicular to the center axis larger than that of the inner
3 periphery of the reel.

1 18. The winder insert of claim 17, wherein the reel is disposed between
2 the lever member and the flange.

1 19. The winder insert of claim 1, wherein a segment of an outer
2 periphery of the winder insert is spaced from a corresponding segment of the
3 inner periphery of the reel.

1 20. The winder insert of claim 1, wherein the winder insert defines at
2 least one retainer for engaging a surface of the reel.

1 21. The winder insert of claim 20, wherein the at least one retainer is a
2 spring tab formed integral with and flexible with respect to the winder insert.

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1 22. A manual winder mechanism for a fish tape device having a reel
2 and a reel handle that can be rotated about a center axis relative to the reel
3 handle to wind fish tape around an inner periphery of the reel defining a center
4 opening, the winder mechanism comprising:
5 a hub having a center opening concentric with the center axis and formed
6 through a sprocket section having an outer periphery adapted to fit within and
7 engage the inner periphery of the reel;
8 a shaft rotatably disposed within the center opening of the hub along the
9 center axis;
10 a handle connected to the shaft for rotating the shaft about the center
11 axis; and
12 a clutch disposed along the center axis about the shaft and having an
13 outer surface fixed with respect to the hub, wherein the clutch is rotatable about
14 the center axis by engagement of the shaft when the shaft is rotated in a first
15 rotational direction which thereby rotates the reel in the first rotational direction
16 relative to the reel handle, and wherein the shaft is rotatable in a second
17 rotational direction essentially without rotating the clutch in either the first or
18 second rotational directions.